

AN INSECT LODGING HOUSE

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Early in July, 1942, I tied a small, white cord one eighth of an inch in diameter to a branch of a live oak tree and by chance left one piece two feet three inches long hanging down, the end being four feet two inches above the ground. The shade from the tree and nearness to a house kept the cord from being in bright sunlight at all times of day. The cord itself was of a kind called "chalk line" and consisted of three tightly twisted strands which in turn were tightly twisted together, making the cord quite firm.

No notice was taken of the cord until soon after sunset July 31 when I chanced to see on it about 40 small wasps, later identified by the United States Bureau of Entomology as *Myzine maculata* (F.). How long the cord had already been used as a sleeping place is of course unknown.

At first it was assumed that the gathering of the wasps at that place was only incidental and that after a few days they would disappear, but daily observations showed the wasps there every night and the cord was watched each day thereafter, both in the morning and during twilight and continually until November 10, the last wasp seen being on October 31, a total period of three months. All the wasps were males. Their abundance during this period varied greatly, but from August 26 to September 11, except for four days, none were present in the evenings. This may have been due to the appearance on the cord during these days in that period of adult ant lions whose presence before leaving for the night may have driven the wasps away. This condition is discussed below.

After the last ant lion disappeared the wasps began to gather again and were present in fair though varying numbers until October 11; thereafter four was the largest number seen at one time and there were days when none was present.

Observations apparently chanced to begin during an abun-

dance period of the wasps, followed by a reduction in numbers about August 20. Then came the ant lion period with their presence and with the wasps practically absent. On the morning of September 11 there were eight ant lions and no wasps on the cord. I was obliged to be absent from then until the evening of September 24 when 40-50 wasps and no ant lions were on the cord. After a few days of abundance they reduced to about eleven with a slight increase the first week in October, after which there were fewer, varying from one to four, until the end, with an occasional day's entire absence during that time. It would seem that there were two periods of greatest abundance, about the first of August and again about September 22, but with ten or more often present at times both between these dates and afterwards.

Almost without exception more wasps were present at the evening observation time than on the following morning. Evening observations were made when it was almost dark or later, then with the aid of a light. Morning observations were usually about 8:00 A.M., when it had been light for some time and perhaps some wasps had already gone away for the day.

Wasps began to gather singly at the cord even before sunset in some cases, but most of them appeared between sunset and dark, even when it was quite dark. They were slower to come after afternoon showers and often their number was less. On cloudy mornings they were slower to leave the cord than on clear days. At night while it was still quite light they were restless when observed and would often fly away; after dark a light would disturb them and they would move about uneasily.

As a whole they rested head up on the cord though sometimes many would be head down and in one or two instances all were heading down while on several occasions some were seen to reverse their positions. In resting on the cord the body was against it and the claws were used in holding on. I could not make out whether the jaws were also used for this purpose as with the light necessary to see this they would move about.

On one or two occasions wasps were also present on small twigs of the tree close to the cord.

The diameter of the cord was sufficient to permit two wasps to rest opposite each other, but hardly more. On some evenings

when the cord was crowded some of the insects would try to push their way between two others but would succeed only in getting part way between them.

Why the wasps selected the cord rather than tree twigs of about the same size to rest on may possibly have been because the bark of the twigs is smooth and hard while the cord was of a texture which permitted the claws of the insects to more easily obtain a firm grasp. During September other groups of these wasps were observed gathered on Spanish moss hanging from trees some distance from the one under observation. Unfortunately it was not possible to learn if these were at all permanent sleeping places.

With the first appearance of the ant lions (which were identified at the United States Bureau of Entomology as *Myrmeleon mobilis* Hagen) the morning of August 25 the wasps practically disappeared. Possibly the ant lions arriving early in the morning for their daylight sleep disturbed the wasps, driving them away, and if still there when the latter began to come in for the night forced them to seek some other place. Each ant lion was large enough to occupy the space on the cord required to accommodate ten or twelve of the wasps. The ant lions like the wasps rested head up, their bodies hanging down in contact with the cord and with their wings closed. When disturbed they would sidle around the cord so as to place this between them and the observer, and with one eye on each side of the cord watch for further developments.

Several papers on sleeping insects have mentioned the gathering of an allied species, *Myzine sexcincta* (F.) at the same place "night after night" (Banks, *JOUR. N. Y. ENT. SOC.*, X, 209, 1902), but I have not found any record of such a prolonged residence as here given or of any such habits of any ant lion.

In this connection it may be permitted to say that one morning while many of the wasps were still present a blue jay perched on a branch about a foot above the cord and examined it carefully from there. Then it suddenly swooped downward brushing along the cord with one wing and giving one of its disagreeable shrieks as it went. It made no attempt to catch any of the wasps but they lost no time in departing in all directions.